

1645
RECEIVED

OCT 13 2000

TECH CENTER 1600/2000

ENTERED

RAW SEQUENCE LISTING

DATE: 10/06/2000

PATENT APPLICATION: US/09/184,418A

TIME: 19:07:07

Input Set : A:\184418.txt

Output Set: N:\CRF3\10062000\I184418A.raw

```

3 <110> APPLICANT: Hahn, Beatrice
4 Gao, Feng
5 Shaw, George
7 <120> TITLE OF INVENTION: CLONES AND SEQUENCES FOR NON-SUBTYPE B ISOLATES OF HUMAN
8 IMMUNODEFICIENCY VIRUS TYPE 1
10 <130> FILE REFERENCE: D6287
12 <140> CURRENT APPLICATION NUMBER: US 09/184,418A
13 <141> CURRENT FILING DATE: 1998-11-02
15 <160> NUMBER OF SEQ ID NOS: 108
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 8968
21 <212> TYPE: DNA
22 <213> ORGANISM: Human immunodeficiency virus type 1
24 <220> FEATURE:
25 <223> OTHER INFORMATION: isolate=93BR020; 133..1611:gag; 4369.4947:vif;
26 4887.5177:vpr; 5158.7767:tat; 5297.7957:rev;
27 5396.5641:vpv; 5559.8099:env; 8101.8727:nef
29 <400> SEQUENCE: 1
30 ctgaaagcga aagtaaacca gagaagaact ctgcacgcag gactcggctt gctgaagtgc 60
31 acacggcaag aggcgagagc ggcgactggt gactacgcca aaatttgact agcagaggct 120
32 agaaggagag agatgggtgc gagagcgcca gtattaaagc ggggaaaatt agatgcttgg 180
33 gaaaaaattc ggtaagggcc ggggggaaag aaaaaatata gactaaaaca tctagtatgg 240
34 gcaagcaggg agctagaacg atttgacttt gatccaggcc ttctagaaac atcagaaggc 300
35 tgcgaaaaaa taataggaca gttacaacca tcccttcaga caggatcaga agagctcaaa 360
36 tcattatata atacaatagc agtcctctat tatgtacatc aaaaggtaga ggtaaaagac 420
37 accaaggagg ctttagagaa gctagaggaa gaacaaaaca aaggctcggc aaagacacag 480
38 caagcgactg ctgaaaaagg ggtcagtcac aattacccta tagtacagaa tcttcaggga 540
39 caaatggtac accagtcttt atcacctaga actttaaatg catgggtaaa ggtgatagaa 600
40 gagaaggctt ttagtcacga agtaataccc atgttttcag cattatcaga aggggccact 660
41 ccacaagatt taaacaccat gttaaataca gtggggggac atcaagcagc catgcaaatg 720
42 ttaaaagaca ccatcaatga ggaggctgca gaatgggaca gattacatcc aacacaggca 780
43 ggacccatcc ccccggtca gataagggaa cctaggggaa gtgatatagc tggaaactac 840
44 agtacccttc aggaacaaat acaatggatg acaggcaacc cacctgtccc agtgggagaa 900
45 atgtataaaa gatggatcat cctaggatta aataaaatag taagaatgta tagccctgtc 960
46 ggcatttttg acataagaca agggccaaaa gaacccttta gagactatgt agacaggttc 1020
47 tttaaaaccc taagagctga gcaagctaca cagggaagtaa aggggttgat gacagacacc 1080
48 ttgttggctc aaaatgcgaa cccagattgt aagaccattt taaaagcatt gggaccaggg 1140
49 gctacactag aggaatgat gacagcatgt cagggagtggt gaggacctag ccataaggca 1200
50 agagtgttgg ctgaggcaat gagccaagca acaataacag ctataatgat gcagaaaagt 1260
51 aactttaagg gccaaagaag aattgttaaa tgctttaatt gtggcaaaag aggcacata 1320
52 gccaaaaatt gcaggggccc tagaaaaaag ggctgttggg agtgttgaag agagggacac 1380
53 caaatgaagg actgcactga gagacaggct aatttttttg ggaaaaattg gccttccaac 1440
54 aaggggaggg ccggaactt catccagaac aggccagagc cgtcagcccc gccagcagag 1500
55 agcttcaggt tcggggagga gacaaccca tctccgaagc aggagcagaa agacgaggga 1560
56 ctgtaccctc ccttagcttc cctcaaatca ctctttggca acgaccccta gtcacaataa 1620
57 gagtaggggg acagctaaa gaagctctat tagatacagg agcagatgat acagtattag 1680
58 aagacgtaaa tttgccagga aatgggaaac caaaatgat agggggaatt ggaggtttta 1740

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/184,418A
 DATE: 10/06/2000
 TIME: 19:07:07

Input Set : A:\184418.txt
 Output Set : N:\CRF3\10062000\I184418A.raw

```

59 tcaaagtaaa acagtatgat agcatactca tagaaatttg tggacacaga gctataggtta 1800
60 cagtgttagt aggacctacg cctgtcaaca taatttggaag aaatatgttg acccagattg 1860
61 gttgtacttt acattttcca attagtcccta ttgagactgt accagtaaaa ttgaagccag 1920
62 gaatggatgg cccaaagggtt aaacaatggc cattgacaga agaaaaaata aaagcattaa 1980
63 cagaaatatg tatggaaatg gaaaagggaag gaaaaatttc aaaaattggg cctgaaaatc 2040
64 catacaatac tccagtattt gccataaaga aaaaagacag tactaaatgg aggaaattag 2100
65 tagatttcag agaacttaat aaaagaactc aagatttttg ggaggttcaa ttaggaatac 2160
66 cgcataccagc aggggttaaaa aagaaaaagt cagtaacagt actggatgtg ggggatgcac 2220
67 atttttcagt tccttagat aaggatttca ggaagtacac tgcattccacc atacctagta 2280
68 ccaacaatga gacaccagga gttagggtacc agtacaatgt gcttccacaa ggatggaaaag 2340
69 gatcaccagc aatatttcaa tatagcatga caaaaatctt agatcccttt agagcaaaaa 2400
70 atccagacat agttatctac caatacatgg atgatttgta ttaggggtct gacttagaaa 2460
71 taggacagca tagaacaata atagaagagt taagagaaca tctactgaaa tggggattaa 2520
72 ctacaccaga caaaaaacat caaaaagaac cccattcct ttggatgggg tatgaactcc 2580
73 atcctgataa atggacagtg cagcctatac aattgccaga caaggacagc tggactgtca 2640
74 atgatataca gaagttagta ggaaaactaa attgggcaag tcagatttat ccagggatta 2700
75 aagtaaaaaa attatgtaaa ctcttaggg gagccaaggc actaacagac atagtgcac 2760
76 tgactacaga agcagagtta gaattggcag agaataggga gattctaaaa gaaccagtac 2820
77 atggggcata ttatgacccg tcaaaagact taatagcaga aatacagaaa caagggcaag 2880
78 ggcaatggac atatcaaat tatcaagagc catttaaaaa tctaaaaaca ggaagtatg 2940
79 caaaaatgag gtctgcccac actaatgatg taaaacagtt aacagaagca gtgcaaaaa 3000
80 tatctctaga aagcatagta atatggggca agactcctaa gtttagacta ccatatttaa 3060
81 aagagacatg ggatacatgg tggacagagt actggcaagc cacctggatt cctgagtggtg 3120
82 agtttgtaaa tccccccct ctagtataac tatggtatca gttagaaca gagcccatag 3180
83 taggagcaga aaccttctat gtagatgggg catctaatag agagacaaa aaaggaaaaag 3240
84 cagatatagt tactgacaga ggaagacaaa aagcgggtct cctaactgag actacaaatc 3300
85 agaaggctga gttacaagca attcagttag ctttacagga ttcaggatca gaagtaaca 3360
86 tagtaacaga ctacagtat gcattaggaa tcattcaagc acaaccagat aagagtgaat 3420
87 cagagttagt caatcaata atagagcaat taataaaaaa ggaaaaggtc tacctgtcat 3480
88 gggtagcagc acacaaaggg attggaggaa atgaacaagt agataaatta gtcagtgtctg 3540
89 gaatcaggaa agtactgttt ctatagtgga tagataaggc acaagaggaa catgaaaaat 3600
90 atcacaacaa ttggagagca atggctagt attttaatat accagctgta gtagcaaaaag 3660
91 aaatagtagc tagctgtgat aaatgtcagc taaaagggga agccatgcat ggacaagtag 3720
92 attgtagccc agggatatgg caatttagatt gcacacattt agaaggaaaa attatcctgg 3780
93 tagcagtcca ttagctagt ggtacactag aagcagaagt tatcccagca gaaacaggac 3840
94 aagagacagc ctacttcccta ctaaagttag caggaaagtg gccagtaaaa acaatacata 3900
95 cagacaatgg caccaatttc accagtcca cggttaaggc agcttggttg tgggcaggta 3960
96 tccagcagga atttggaaat ccttacaacc cccaaagtca aggagttaga gaatctatga 4020
97 ataaagagct aaagaaaatc ataggacaga taagagatca agctgaacat cttagacag 4080
98 cagtccaaat ggcagtattc attcacaatt ttaaaagaaa aggggggatt gggggatata 4140
99 gtgcagggga aagaacaata gacataatag caacagacat acaactaga gaattacaaa 4200
100 acaaaattat aaaaattcaa aatttccggg tttattacag ggacagcaga gacccagttt 4260
101 gaaaaggacc agcaaagcta ctctggaaaag gtgaaggggc agtagtcata caagacaata 4320
102 gtgaaataaa ggtagtcca agaagaaaag caaatgatcat tagggattat gaaaaacaga 4380
103 tggcaggtga tgattgtgtg cgaggtagac aggatgagga ttaacacatg gaaaagttaa 4440
104 gtaaaatacc atatgcataat ttcaaaagaa gccaaaggat ggttttatag acatcacttt 4500
105 gaaagcaggg atccaaaaat aagttcagaa gtacacatcc cactagagac agctgaatta 4560
106 gtaataacaa catactgggg gctgcttcca ggagaaagag aatggcatct gggtcagggg 4620
107 gtctccatag aatggaggca ggggaggtat agaacacaaa tagaccctgg cctggcagac 4680

```

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/09/184,418A DATE: 10/06/2000
 TIME: 19:07:07

Input Set : A:\184418.txt
 Output Set: N:\CRF3\10062000\I184418A.raw

```

108 caactgatcc atatatatta ttttgattgt ttttcagaat ctgccataag gaaagccata 4740
109 ttaggacata aaattagccc taggtgtaac tatcaagcag gacataacaa ggtaggatct 4800
110 ctacaatact tggcactaac agcattaata gctccaaaa agacaaagcc gcctttgcct 4860
111 agtgtccaga aactagtaga agacagatgg aacaagcccc agaagaccag gggccacaga 4920
112 gagagccata caatgaatgg acactagatc ttttagagga gcttaagaat gaagctgtta 4980
113 gacatttttc taggccatgg ctccatagct taggacaaca tatctataac acctatgggg 5040
114 atacttggga aggagtggaa gcaatcataa ggatattgca acaactactg tttatccatt 5100
115 tcagaattgg gtgccgtcat agcagaatag gcattactcg acagagaaga gtaagaaatg 5160
116 gaactagtag atccctaact agatccctgg aacctccag gaagccagcc tacaactcct 5220
117 tgtaccagat gttattgtaa atgggtgtgc tttcattgtt actgggtgctt tacaacgaag 5280
118 ggcttaggca tctcctatgg caggaaagaag cggagacagc gaccaagaac tcctcaaaagc 5340
119 agtcagatag atcaagattt tgtacaaaag cagtaagtat tgtaaacgat atgtaatgtc 5400
120 aaatttggta gcaataggca tagcagcatt aatagtagca ctaataataa caatagtgtg 5460
121 gtggactata gcatatatag aatataagaa actggtaagg caaagaaaaa taaatagggtt 5520
122 atataaaaga ataagcgaaa gagcagaaga cagtggcaat gagagtgagg gggatgcaga 5580
123 ggaattggca gcacttgggg aagtgggggc ttttattcct ggggacatta ataactgtga 5640
124 atgctgcaga aaacttatgg gttacagtct attatggggt acctgtgtgg aaagaagcaa 5700
125 ccactactct attctgtgca tcagatgcta aatcatatga aaaagaggca cataatgtct 5760
126 gggctacaca tgcttgtgta cccacagatc ccaatccaca agaagtatgt ctggaaaatg 5820
127 taacagaaaag gtttaatatg tgggaaaata acatggtaga acaaatgcac acagatataa 5880
128 tcagtttatg ggatcaaaag ctaaaagccat gtgtgaagtt aaccccactc tgtgttactt 5940
129 tagattgtag aaacattggc accaatggga ccaatgacac tattgccatc aatgacactc 6000
130 tgaagggaag tccagaggca atacaaaact gttctttcaa tacaaccaca gaaataagag 6060
131 ataagcagct gaaagtacat gcactttttt ataaacttga tatagtacaa atcaacaagg 6120
132 atgacaatag aacatacaga ctaataaatt gtgatgcctc aaccattaca caggcttgtc 6180
133 caaagggtatc ttgggatcca attcccatc attattgtgc tccagctggg tatgcgattc 6240
134 taaagtgtaa tgagaaaaat ttacacaggga cagggtcatg caagaatgtc agtacagtac 6300
135 aatgtacaca tggaattaaa ccagtgggtat ccactcaatt gttgttaaat ggcagcctag 6360
136 cagaaggaga gatagtaatc agatctcaaa atatctcaga taatgcaaaa accataatag 6420
137 tgcaccttaa tgaatctgta cagattaatt gtacaagacc caacaacaat acaagaaaaa 6480
138 gaatatcttt aggaccagga cgagtatttt atacaacagg agaaataata ggagacatca 6540
139 gaaaggcaca ttgtaacggt agtgggaacac aatggaggaa cacgttagca aaggtaaagg 6600
140 caaagttagg gtctttattc cctaattgca caataaaatt taactcatcc tcaggagggg 6660
141 acctagaaat tacaaggcat aattttaatt gtatgggaga atttttctac tgtaatacag 6720
142 atgaactggt taatgacaca aaattcaatg acacaggatt caatggcact atcactctcc 6780
143 catgtcgaat aaaacaaatt gtaaacatgt ggcaggaaat gggacagaca atgtatgcca 6840
144 atccattgca aggaacatt acctgtaact caaatattac aggtctgcta ttgacaagag 6900
145 atgggtggtc gaatagtact aatgagacct tcagacctgg gggaggaaat atgaaagaca 6960
146 attggagaag tgaattatat aaatataaag tagtagaaat tgaaccacta ggagtgcac 7020
147 ccaccaaggg aaaaagacaa gtggtgaaga gagaaaagag agcagtgagg ctaggagctc 7080
148 tgttccttgg gttcttggga gcagctggaa gcactatggg cgcggcgtca ataacgctga 7140
149 cggtacaggg cagacaatta ttgtctggaa tagtgcaaca gcagagcaat ctgctgaggg 7200
150 ctattgaagc gcaacagcat ctgttgagcgc tcacagtctg gggcattaaa cagctccagg 7260
151 caagagtcct ggctgtggaa agatacctaa aggatcaaca gctcctaggg ctttggggct 7320
152 gctctggaaa actcatctgc accactaatg tgccctggaa ctctagttag agtaataaat 7380
153 ctcttgagga gatttggggg aacatgacct ggatggagtg ggaagaaagag gttagcaatt 7440
154 actcaaaaga aatatacagg ttaattgaag actcgcagaa ccagcaggaa aagaatgaac 7500
155 aagaattatt agcattggac aaatgggcaa gtctgtggaa ttggtttgac ataacacagt 7560
156 ggctgtggta tataaaaaata ttcataatga tagtaggagg cttgataggc ttaagaatag 7620

```

RAW SEQUENCE LISTING DATE: 10/06/2000
 PATENT APPLICATION: US/09/184,418A TIME: 19:07:07

Input Set : A:\184418.txt
 Output Set: N:\CRF3\10062000\I184418A.raw

```

157 tttttactgt gctttctata gtaaataagag ttaggaaggg atactcacct ttgtcatttc 7680
158 agaccatata cccaagcccg agggaacccg acaggcccga aggaatcgaa gaaggagggtg 7740
159 gagagcaagg caaagacaga tccgtgagat tagtgaccgg attcttagct cttgcctggg 7800
160 acgacctgcg gaacctgtgc ctcttcagct accgccactt gagagacttc atattaattg 7860
161 cagcgaggat tgtggacagg gggctgaaga ggggggtggga agctctcaaa tatctgggga 7920
162 atctcacaca gtattggggg caggaactaa agaatagtgc tattagcttg cttaatgcca 7980
163 cagcaatagc agtagctgag tggacagata gatttataga agctttgcaa agagctggta 8040
164 gagctattct caacatacct agaagaataa gacagggtt ggaagggtt ttgtataaaa 8100
165 atgggtggca agtggtcaaa aagtagtata gttggatggc ctgctataag ggaagaatg 8160
166 aggcgaaccc ctccaacccc tccagcagca gaggggggtg gagcagtgtc tcaagactta 8220
167 gaaagacggg gggcaattac aagcagcaat actagagcta ataactctga cttggcctgg 8280
168 ctggaagcac aagaggaaga cgaagtaggc ttccagtca gacctcaggt accttaaga 8340
169 ccaatgacct ataaggagc ttagatctc agtcactttt taaaagaaaa ggggggactg 8400
170 gaagggttaa ttactccaa gagaagacaa gagatccttg atctgtgggt ctaccacaca 8460
171 caaggctact tcctgattg gcagaactac acaccagggc cagggatcag atatccactg 8520
172 accatggggg ggtgcttcaa gctagtacca gttgaccag aggaggtaga aaaggccaat 8580
173 gaaggagaga acaactgctt gctacacccc atgagccaac atggaatgga ggatgaagac 8640
174 aaagaagtac tgaatggga gtttgacagc cgttgccac tgagacacat agccagagag 8700
175 agacatcccg agtactacca agactgagac tgctgacaca gagattgctg acacagaaga 8760
176 atctaaaggg actttccact ggggactttc cagagggtgg gccagagggc gggactggg 8820
177 agtggctcac cctcagatgc tgcataaag cagccgcttt tcgctgtac tgggtctctc 8880
178 tagttagacc agatttgagc cggggagctc tctggctagc tagggaaacc actgcttaag 8940
179 cctcaataaa gcttgcttg agtgettt 8968
181 <210> SEQ ID NO: 2
182 <211> LENGTH: 8987
183 <212> TYPE: DNA
184 <213> ORGANISM: Human immunodeficiency virus type 1
186 <220> FEATURE:
187 <223> OTHER INFORMATION: isolate=92NG083; 156.362:gag; 1727.4465:pol;
188 4410.4988:vif; 4928.5218:vpr; 5199.7795:tat;
189 5338.8000:rev; 5440.5466:vpu; 5593.8142:env;
190 8144.8767:nef
192 <400> SEQUENCE: 2
193 atgaaagcga aagttaatag ggactcgaaa acgaaagttc cagagaagtt ctctcgacgc 60
194 aggactcggc ttgctgaagt gcacacagca agaggcgaga gcggcgactg gtgagtacgc 120
195 cattttttga ctagcggagg gctagaagga gagaggtggg tgcgagagcg tcagtattaa 180
196 gcgggggaaa attagattct tgggaaaaaa ttcggttaag gccaggggga aggaaaaagt 240
197 ataaactaaa acatatagta tgggcaagca ggggaactgg gagatttgca cttaacctg 300
198 accttttaga aacagcagaa ggttgtgtgc aaataatgaa acagttgcaa ccagctctct 360
199 agacaggaac agaggagctt agatcattat ttaatacagt agcaaccctc tactgtgtac 420
200 atcaaaagat agaggtaaaa gacaccaaag aagctccaga ggaagtggaa aaaatacaaa 480
201 agaacagtca gcaagaaata cagcaggcag caaagaatga aggaacagat aaccagtgca 540
202 gccaaaatta tcctatagtg cagaatgcac aaggggcaat gatacatcag gccatatcac 600
203 ctaggacttt gaatgcgtgg gtaaaagtag tagaagaaaa ggccttcagt ccagaagtaa 660
204 taccatgttt ttcagcatta tcagaggagg ccaccccaca agattttaat accatgctaa 720
205 atacagtggt ggggcatcaa gcagctatgc aaatgctaaa ggatactatc aatgatgaag 780
206 ctgcagagtg ggacaggata catccacagc aggcagggcc tattccacca ggccaaataa 840
207 gagagcctag tggaaagtga atagcaggaa ctactagtac cctgcaggaa caaataagat 900
208 ggatgaccag caaccacact atcccagtg gagaaatcta taaaagatgg ataactctg 960

```

RAW SEQUENCE LISTING DATE: 10/06/2000
 PATENT APPLICATION: US/09/184,418A TIME: 19:07:07

Input Set : A:\184418.txt
 Output Set: N:\CRF3\10062000\I184418A.raw

```

209 gattaaataa aaatgtgaga atgtatagcc ctgtcagcat tttggacata agacaagggc 1020
210 caaaaagaacc ctttagagat tatgtagata ggttctttaa aacttttgaga gctgagcaag 1080
211 ctacacagga agtaaaaggt tggatgacag acaccttggt ggttcaaaat gcgaaccag 1140
212 attgtaaaac catcttaaga gcattaggac caggagctac actagaagaa atgatgacag 1200
213 catgtcaggg agtgggagga cccagccata aagcaagagt tttagctgag gcaatgagcc 1260
214 aggcacaggg tgcagcagca gcagccataa tgatgcagaa aagcaatttt aagggcccg 1320
215 gaagaattat taagtgtttc aactgtggca aggaaggaca tctagccaga aattgcaggg 1380
216 cccctaggaa aaaggcgtgt tggaaatgtg gaaaggaggg acatcaaagt aaagaatgca 1440
217 cggaaggga ggctaatttt ttgggaaaaa ttggccttc caacaagggg aggccaggaa 1500
218 actttctcca gaacaggaca gagccaacag cccaccagc agagagcttc ggattcgag 1560
219 aggagatagg cccctccccg aagcaggagc caaaggagaa ggagctatat cccttaactt 1620
220 cccctcaaat actctttggc agcgaccct agtcacagta aaaaataggg gacagctaatt 1680
221 agaagcccta ttagacacag gagcagatga cacagtatta gaaggaataa atttaccag 1740
222 aaaaatggaa caaaaatga tagggggaat tggaggtttt atcaaagtaa gacagtatga 1800
223 tcaataactt atagaaattg gtgaaaaaaa ggctataggg acagtattag taggacctac 1860
224 acctattaac ataattggga gaaatatgtt gactcagatt ggttgtactt taaactttcc 1920
225 aataagtctt attgaaactg taccagtaaa attaaagcca ggaatggatg gcccaagggt 1980
226 taaacaatgg ccattgacag aagagaaaat aaaagcatta acagaaattt gtaaagacat 2040
227 ggaaaaggaa ggaaaaattt caaaaatttg gcctgaaaa ccatataaca ctccaattt 2100
228 cgccataaag aaaaaagaca gtactaaatg gaaaaaattg gtatatttca gagaacttaa 2160
229 taaaagaact caagacttct gggaggtcca attaggaata cctcaccceg cggggttaaa 2220
230 aaagaaaaga tcagtaacgg tactagatgt gggagatgca tacttttcag ttcccttaga 2280
231 taaagacttt agaaagtata ctgcattttac tatacctagt ataaataatg agacaccagg 2340
232 gattagatat caatacaatg tgcctccaca gggatggaaa ggatcaccag caatatttca 2400
233 gagtagcatg acaaaaattt tagagccttc tagaacaaaa aatccagaaa tggtagctta 2460
234 ccaatcacatg gatgattttat atgtaggatc tgacttagaa atagggcagc atagagcaaa 2520
235 aatagaggag ttaagagaac atctactgaa atggggattg accacaccag ataaaaaca 2580
236 tcagaaagaa cctccattcc tttggatggg atatgagctc catcctgaca aatggacggt 2640
237 acaacctata cagctgccag aaaaggaaga ttggactgtc aatgatatac aaaagttagt 2700
238 gggaaaacta aattgggcaa gtcagattta tccagggtt aaagtaaaag acctatgtag 2760
239 actccttagg ggggccaaa cactaacaga catagtacct ctacggcag aagcagaat 2820
240 ggagctggca gagaacaggg aaattctaaa agaacctgta catggagtct atcatgacct 2880
241 atcaaaagaa ttaatagcag aagtacagaa gcaagggcca gaccaatgga catatcaaat 2940
242 ttatcaagag ccatacaaaa atctaaaaac aggaaaatat gcaaaaaggg ggtctgcccc 3000
243 cactaatgat gtaaaacaat taacagaagt agtgcaaaaa atagccacag agggcatagt 3060
244 aatctgggga aagattccta aatttaaact acctatacga aaagaaacat gggaaagtatg 3120
245 gtggacagag tactggcagg ccgcctggat tctgagtgag gagtttgtca ataccctcc 3180
246 tctagtaaaa ctatggtatc aattagaaac agaaccata ccaggagcag aaacttacta 3240
247 tgtagatggg gcagctaata gggagacaaa attaggaaag gcaggacatg ttactgacaa 3300
248 aggaaaacaa aaaattatta ccctaactga aacaacaaac caaaaggctg aattacatgc 3360
249 aattcaacta gctttgcagg actcaagacc agaagtaaac atagtaacag actcacagta 3420
250 tgcattagga atcattcaag cacaaccaga taggagtggg tcagaattag tcaatcaaat 3480
251 aatagaacag ctaataaaaa aggaaaaggt ctacctgtca tgggtaccag cacacaaagg 3540
252 gattggagga aatgaacaag tagataagct agtcagtagt ggaatcagga aagtattatt 3600
253 tttggatggc atagataaag cccaagaaga acatgaaaga tatcacagca attggagagc 3660
254 aatggctagt gattttaatc tgccacctgt agtagcaaaa gaaatagtgg ccagctgtga 3720
255 taaatgtcaa ctaaaagggg aagccatgca tggacaagta gactgtagtc caggaaatag 3780
256 gcaattagat tgtacacatt tagaaggaaa aattatcata gtagcagttc atgtagccag 3840
257 tggctatata gaagcagaag ttatccagc agaaaacagg caggaaacag catactttat 3900

```

VERIFICATION SUMMARY

DATE: 10/06/2000

PATENT APPLICATION: US/09/184,418A

TIME: 19:07:08

Input Set : A:\184418.txt

Output Set: N:\CRF3\10062000\I184418A.raw